PRE-POSITIONED EXPEDITIONARY KIT (PEAK) TRAINING LESSON PLAN

PEAK REMOTE SITE POWER

INSTRUCTIONS: This document provides the lesson plan for the capability listed above. This lesson plan must be used in conjunction with the associated capability user manuals.

LESSON P02: PEAK REMOTE SITE POWER **VERSION 1**

1 MAY 2012

FREQUENCY OF TRAINING: Quarterly

SECTION I. ADMINISTRATIVE DATA

1.1. Prerequisite Lesson(s):

LESSON NUMBER	LESSON TITLE
	NONE

1.2. Task(s) Taught or Supported:

Task #	Task Title
P02-0001	Understand the PEAK remote site power module features and capabilities
P02-0002	Transporting PEAK remote site power modules to deployment site
P02-0003	Operating procedures – powering system on
P02-0004	Operating procedures – using remote site power modules to provide 12 VDC output
P02-0005	Operating procedures – powering system off
P02-0006	Charging remote site power modules using internal AC charger
P02-0007	Monitoring battery status – using battery meter
P02-0008	Preparing PEAK remote site power modules for storage and transport

1.3. Task(s) Reinforced:

TASK NUMBER	TASK TITLE
	NONE

1.4. Academic Hours for this Lesson:

CLASSROOM	**0:10**
HANDS-ON	**0:50**

TESTING	**0:40**
TOTAL HOURS	**1:40**

Note 1: Time is shown in Hours: Minutes

Note 2: 1 academic hour = 60 minutes and does not include "break" time. 2:30 represents two 60-minute academic hour and an additional 30 minutes.

1.5. Testing:

Consult check on learning. Students will demonstrate accomplishment of the TLO by correctly answering the instructor's questions and successfully performing Learning Step/Activity as noted for each task.

1.6. Security Clearance/Access: UNCLASSIFIED

1.7. Foreign Disclosure Restrictions: NONE

1.8. References:

Number:	Title:	Date:	Additional Information:
1	USER MANUAL—POWER MAIN AND REMOTE SITE	MAR 2012	

1.9. Student Study Assignments: Read the PEAK User Manual – Power Main & Remote Site.

1.10. Instructor Requirements: The instructor shall have previously read the User Manual – Power Main & Remote Site and performed all Tasks listed in Table 1.2.

1.11. Additional Support Personnel Requirements: NONE

1.12. Equipment Required:

Item:	Quantity:
Remote Site Power Case inclusive of charging cord and power cord. Battery case should have > 80% state of charge	1
Source of 110VAC power	1
12 VDC load or multi meter	1
PPE (gloves and hardhat)	5 sets

1.13. Materials Required: Firm, level surface large enough to allow remote site power case to be deployed and for personnel to safely walk around the equipment to perform tasks.

1.13.1. Instructor Materials: PEAK User Manual – Power Main & Remote Site.

1.13.2. Student Materials: NONE

1.14. Classroom Training Area and Range Requirements: Firm, level surface large enough to allow remote site power case to be deployed and for personnel to safely walk around the equipment to perform tasks.

1.15. Instructional Guidance: Before presenting this lesson, instructors must thoroughly prepare by studying this lesson and identified reference material. It is recommended that the instructor review and complete the PEAK Remote Site Power Lesson Plan prior to the lesson.

PEAK REMOTE SITE POWER OPERATOR SKILLS

TASK P02-0001: Understand the PEAK remote site power module features and capabilities

Method of Instruction: Classroom and Hands-on

Instructor to student ratio is __1__ : __8___

Time of instruction (minutes): ___10____

References: ____1_____

Motivator: Familiarity with and accountability for PEAK remote site power and associated equipment.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Understand the PEAK remote site power features and capabilities
CONDITION:	The PEAK includes a remote site power module to enable users to have a source of power at both the main site as well as a secondary, remote operational post to enable operational flexibility. This task involves understanding the features and capabilities of the PEAK remote power site system as well as equipment used to charge the remote power site system. This task therefore requires the all PEAK equipment and the references listed above.
STANDARD:	Be able to identify all components and basic functions of PEAK remote site and charging equipment.

Safety Requirements: Instructor and students shall wear PPE while loading and unloading equipment from the PEAK ISU-60.

Risk Assessment Level: LOW

Environmental Considerations: None

Instructional Lead-In: This task provides a basic overview of PEAK Remote Site Power features and capabilities.

Performance Steps:

1. Read and discuss User Manual – Power Main & Remote Site.
2. Remove and inventory all equipment from the Main and Remote Site Power modules.
    a. Braille Battery OASYS Energy Remote Site Power Case
        i. Transport and Operating case

ii. 120 VAC Charging cord
iii. 12 VDC power delivery cord

3. Familiarize and discuss remote site power features and major component locations
    a. User Manual – Power Main & Remote Site - (PEAK Power Section; Remote Site Power subsection)

Evaluation Preparation: *Evaluate this task at the end of the PEAK remote site power features and capabilities training.*
Notify student that he/she will be evaluated on his/her ability to identify and inventory all components and basic functions of PEAK Remote Site Power.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe power system features and major component locations.
c) Have students conduct inventory and inspection.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0002: Transporting PEAK remote site power modules to deployment site

Method of Instruction: Hands-On
Instructor to student ratio is __1__ : __8___
Time of instruction (minutes): ___5____
References: ____1_____

Motivator: Knowledge of how to transport remote site power modules from main site to a remote site.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Be familiar with the equipment and cases required to transport the equipment.
CONDITION:	This task should be conducted with the physical cases present in order to visually verify handles, wheels and other transport-pertinent aids.

STANDARD:	Students will be able to identify and describe the equipment to be transported to a remote site and how to safely transport the equipment.

Safety Requirements: Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: NONE

Instructional Lead-In: This task provides a basic knowledge of how to safely and effectively move relevant remote site equipment from the main site to a remote site.

Performance Steps:

1. Read PEAK User Manual – Power Main & Remote Site page 13-15.
2. Have students explain functions on the module case which aid with transport (wheels, handle), and perform safe and effective movement of Remote Site Power equipment.

Evaluation Preparation: *Evaluate this task at the end of the Transporting PEAK remote site power modules to deployment site training.*
Notify student that he/she will be evaluated on his/her ability to identify and demonstrate transport of remote site power equipment.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe transport aids.
c) Have students conduct safe and effective transport of the equipment.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0003: Operating procedures – powering system on

Method of Instruction: Hands-on
Instructor to student ratio is __1__ : __8___
Time of instruction (minutes): ___5____
References: ____1_____

Motivator: Safely and efficiently perform steps to turn on the Remote Site Power module.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Be familiar with the equipment and how to safely turn the system on to access power.
CONDITION:	This task should be conducted with a Remote Site Power module with at least 80% charge.
STANDARD:	Understand how to properly and safely turn the Remote Site Power module on to access power at the remote site.

Safety Requirements: Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: NONE

Instructional Lead-In: This task provides information and instruction on how to correctly and safely turn the Remote Power Site module on.

Performance Steps:

1. Using the PEAK User Manual – Power Main & Remote Site as a guide (page 53-55) have students describe the process to turn on the module.
2. Using the PEAK User Manual – Power Main & Remote Site as a guide (page 53-55) have students turn the Remote Site Power module on.

Evaluation Preparation: *Evaluate this task at the end of Operating procedures – powering system on training.*

Notify student that he/she will be evaluated on his/her knowledge of the purpose of and steps involved in powering the system on.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe the process to turn on the module.
c) Ask students to safely turn the Remote Site Power module on.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0004: Operating procedures – using remote site power modules to provide 12 VDC output

Method of Instruction: Hands-on
Instructor to student ratio is __1__ : __8___
Time of instruction (minutes): ___5____
References: ____1_____

Motivator: Safely and efficiently use remote site power module to provide onsite 12VDC power output to operate remote site equipment

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Provide remote site 12VDC power using the Remote Site Power module.
CONDITION:	This task should be conducted with a charged Remote Site Power module and a 12 VDC load or multi meter.
STANDARD:	Be able to safely provide 12 VDC power to operate onsite equipment.

Safety Requirements Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: NONE

Instructional Lead-In: This task provides a basic knowledge of how to use the Remote Site Power module to effectively and safely provide 12 VDC of power to operate necessary equipment.

Performance Steps:

1. Using the PEAK User Manual – Power Main & Remote Site as a guide (page54) have students describe the process to enable 12 VDC power output from the Remote Site Power module.
2. Using the PEAK User Manual – Power Main & Remote Site as a guide (pages 54) have students perform the steps required to safely use the module to provide onsite 12 VDC power.

Evaluation Preparation: *Evaluate this task at the end of Operating procedures – using remote site power modules to provide 12 VDC output training.*

Notify student that he/she will be evaluated on his/her ability to successfully use PEAK Remote Site Power Module to provide 12 VDC power.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe the steps involved in using the module to provide onsite 12 VDC power.
c) Ask students to safely and effectively perform the steps involved in using the module to provide onsite 12 VDC power.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0005: Operating procedures – powering system off

Method of Instruction: Hands-on
Instructor to student ratio is 1 : 8
Time of instruction (minutes): 5
References: 1

Motivator: Safely and efficiently perform steps to turn off the Remote Site Power module.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Be familiar with the equipment and how to safely turn the system off.
CONDITION:	This task should be conducted with a charged Remote Site Power module.
STANDARD:	Understand how to properly and safely turn the Remote Site Power module off to stop the flow of electricity.

Safety Requirements: Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: NONE

Instructional Lead-In: This task provides information and instruction on how to correctly and safely turn the Remote Power Site module on.

Performance Steps:

3. Using the PEAK User Manual – Power Main & Remote Site as a guide (page 53-55) have students describe the process to turn off the module.
4. Using the PEAK User Manual – Power Main & Remote Site as a guide (page 53-55) have students turn the Remote Site Power module off.

Evaluation Preparation: *Evaluate this task at the end of Operating procedures – powering system on training.*
Notify student that he/she will be evaluated on his/her knowledge of the purpose of and steps involved in turning the PEAK Remote Site Power Module off.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe the process to turn off the module.

c) Ask students to safely turn the Remote Site Power module off.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0006: Charging remote site power modules using internal AC charger

Method of Instruction: Hands-on
Instructor to student ratio is __1__ : __8___
Time of instruction (minutes): ___10 __
References: ____1_____

Motivator: Proficiency charging the Remote Site Power module using the internal AC charger.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Be familiar the procedures to charge the module using the internal AC charger.
CONDITION:	This task should be conducted with the Remote Site Power module with batteries depleted to less than 90% of total capacity and a source of 120 VAC electricity for charging.
STANDARD:	Be able to charge the module from 120 VAC power sources and assess the charge is being accepted by the Remote Site Power module.

Safety Requirements: Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: None

Instructional Lead-In: This task provides a basic knowledge and ability to perform tasks to charge the module and ascertain the charge is occurring.

Performance Steps:

1. Using the PEAK User Manual – Power Main & Remote Site as a guide (page 55-56) have students describe the process to charge the module and confirm charge is occurring.
2. Using the PEAK User Manual – Power Main & Remote Site as a guide (page 55-56) have students charge the module and affirm charge is occurring.

Evaluation Preparation: *Evaluate this task at the end of Charging remote site power modules using internal AC charger training.*
Notify student that he/she will be evaluated on his/her ability to successfully demonstrate proper charging of the PEAK Remote Site Power modules.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe the process to charge the Remote Site Power module.
c) Ask students to safely and effectively charge the Remote Site Power module.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0007: Monitoring battery status – using integrated battery meter

Method of Instruction: hands-on
Instructor to student ratio is 1 : 8
Time of instruction (minutes): 10
References: 1

Motivator: Familiarity with use of a integrated battery meter to assess sate of charge of batteries in the Remote Site Power module.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Be familiar with use of the integrated battery meter.
CONDITION:	This task should be conducted with the Remote Site Power module and integrated battery meter.

STANDARD:	Be able to perform check of battery charge using integrated battery meter.

Safety Requirements: Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: NONE

Instructional Lead-In: This task provides a basic knowledge of how to use the integrated battery meter to assess the state of charge for the battery in the Remote Site Power module. This is important information to determine if the batteries need charging, if there is sufficient power to operate all power loads for the required time period and/or how power loads may have to be managed. It also provides an indicator if maintenance might be required. Vendor should be contacted to perform maintenance.

Performance Steps:

1. Referencing pages 56-57 in the PEAK User Manual – Power Main & Remote Site the students be able to describe the components of the battery charge system.
2. Referencing pages 56-57 in the PEAK User Manual – Power Main & Remote Site the students be able to perform a battery status check using a battery meter.

Evaluation Preparation: *Evaluate this task at the end of Monitoring battery status – using battery meter training.*

Notify student that he/she will be evaluated on his/her ability to successfully use integrated battery meter to monitor PEAK Remote Site Power module battery status.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe the steps involved in monitoring battery status using integrated battery meter.
c) Ask students to safely and effectively perform the steps involved in monitoring batteries using the integrated battery meter.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.

Transition to Next Task:

TASK P02-0008: Preparing PEAK remote site power modules for storage and transport

Method of Instruction: Hands-on
Instructor to student ratio is __1__ : __8___
Time of instruction (minutes): ___10____
References: ____1 _____

Motivator: Safety and proficiency in preparing the Remote Site Power module for to be repacked inside the PEAK ISU-60 container.

Terminal Learning Objective (TLO):

Note: Inform the students of the following terminal learning objective requirements.
At the completion of this lesson, the student will:

ACTION/TASK:	Be familiar with, and able to perform, procedures to prepare module equipment for packing in the PEAK ISU-60 container.
CONDITION:	This task should be conducted with the module equipment and transport containers present in order to complete actual packing of module equipment into cases to enable its further packing into the PEAK ISU-60 container for transport and/or storage.
STANDARD:	Be able to prepare module to be packed in transport cases to prepare them to be further packed storage and/or shipment in the standard PEAK container.

Safety Requirements: Instructor and students shall wear PPE while working with the equipment.

Risk Assessment Level: LOW

Environmental Considerations: NONE

Instructional Lead-In: Proper packing of module equipment in the provided cases to prepare for repacking the PEAK kit properly which will prevent damage to kit during storage and transport.

Performance Steps:

1. Referencing pages 13 - 14 in the PEAK User Manual – Power Main & Remote Site the students should review and be able to describe and perform the following preparations.
    a. Pack all equipment safely and securely into original, provided transport cases.

b. Transport equipment back to main site to enable the repacking of equipment into the PEAK ISU-60 container following procedures in the User Manual – Power Main & Remote Site

Evaluation Preparation: *Evaluate this task at the end of Preparing PEAK remote site power modules for storage and transport training.*

Notify student that he/she will be evaluated on his/her ability to successfully prepare the PEAK Remote Site Power module for transport.

Check on Learning:

Testing Requirement: Determine if students have learned the material presented by –

a) Soliciting student questions and explanations.
b) Ask students to describe and perform the steps involved in preparing the module equipment for transport by repacking it in the original transport containers.

Feedback: Provide immediate feedback in context to the material presented and correcting student misunderstanding.

Requirement: Provide remedial training as needed.